

Method of Developing Speed and Strength Abilities of Young Boxers 12-13 Years Old

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Abstract: This article examines the features of the development and improvement of the speed and strength qualities of young boxers aged 12-13 years, as well as the results obtained during the pedagogical experiment.

Keywords: strength, speed-strength training, experimental group, control group, training process.

Actuality: As the leading theorists and practitioners in the field of boxing theory and methodology note, this sport, with its variable and conflicting nature of the relationship of opponents in battle, high emotional stress and various effects on the body of boxers, is one of the most difficult acyclic sports. Today, the huge competition in the sports arena, as well as the increase in the sports results of athletes at all stages of their long-term training, show ever higher requirements for the level of development of the physical abilities of boxers. This is especially true for the development of speed-strength abilities, which remain leading in boxing, which require careful study [2]. In this regard, we conducted a study among young boxers 12-13 years old.

Purpose of the study: to identify the features of the development of speed-strength training of young boxers aged 12-13.

Research methods: testing, pedagogical experiment, method of mathematical statistics.

Organization of the study:

The study was conducted in the Children's and Youth Sports School No. 2 in Tashkent, Uchtepa district from 03/01/2022 to 05/04/2022.

The pedagogical experiment involved two groups of boxers (experimental and control) aged 12-13 with the same length of service (8 months), 10 people each.

The groups trained according to the standard program approved by the boxing federation of Uzbekistan. However, for the purposes of the study, in the classes in the experimental group, a complex was used, consisting of exercises of a speed-strength nature.

Before the start of the pedagogical experiment, we conducted testing, the main purpose of which is to identify the development of speed-strength abilities of young boxers [4]. Testing was carried out using the following exercises:

- Tapping test. It consists in measuring the number of brush movements in 10 seconds. (time is measured with a stopwatch). The subject is asked, in a sitting position, to strike at a maximum pace with a pencil on a sheet of paper lying in front of him. Then the number of dots on the paper is counted. The best result of three attempts is recorded in the protocol.
- Throw medicine ball (1 kg) from behind the head forward. Starting position - wide stance. The ball is thrown from behind the head as far as possible. The best attempt out of three is recorded in the protocol.
- Strength endurance. Flexion and extension of the arms in the lying position (number of times). Starting position - lying down. The exercise is done at an average pace until the first

stop, the torso should be straight. The result is evaluated by the number of correct bending of the arms in the lying position.

Research results and their analysis:

The pedagogical experiment was carried out in order to identify the effectiveness of the methodology we developed for the development of speed-strength qualities in young boxers aged 12-13. The control group trained according to the standard method, and the experimental group trained according to the method, which included a set of exercises for the development of speed-strength abilities of athletes. Classes in the experimental group were held 5 times a week for 90 minutes. Once a week (Wednesday) there were training sessions of the type of circuit training at the "stations", which included general physical training exercises and weight training exercises. The station was passed three times and rested between exercises - 1 minute, between stations - 3 minutes.

The experimental group trained according to the following scheme:

Scheme No. 1

Days of the week	Training content
Monday	Warm-up (General Physical Training), exercises with weights - 15-30 minutes; implementation of the complex, improvement of technical and tactical skills in pairs - 30-40 minutes; work on boxing equipment 25-30 minutes; exercises to restore breathing, flexibility and muscle relaxation - 10-15 minutes.
Tuesday	Warm-up - 10-15 minutes; performance of the complex, conditional and freestyle fights - 11-30 minutes; flexibility and recovery exercise - 10-15 min.
Wednesday	Разминка – 10-15 мин.; круговая тренировка на станциях – 30-50 мин.; упражнение на восстановление дыхания, на гибкость и расслабление – 10-15 мин.
Thursday	Group warm-up - 10-15 minutes; game training (football) 45-60 min.; exercises for flexibility and restoration of breathing - 10-15 minutes.
Friday	Warm-up, exercises with weights - 15-30 minutes; improvement of technical and tactical skills in pairs - 30-50 minutes; exercises to restore breathing, flexibility and relaxation - 10-20 minutes.

The pedagogical experiment lasted 2 months.

Considering the obtained data on the development of speed-strength qualities in young boxers aged 12-13 years old in the experimental and control groups, when comparing the indicators of the beginning and end of the pedagogical experiment, an increase in the results for all indicators was observed. (Table 1).

Table-1. The results of testing the control and experimental groups at the beginning and at the end of the experiment

Tests	Control group		Experimental group	
	Start	End	Start	End
Tapping test number of times (10 sec.)	46±3,7	48±2,9	45±3,9	50±2,9
Medicine ball throw from behind the head (1 kg) m.	8.05±0.13	8.8±0.11	8.25±0.12	9.01±0.11
Strength endurance number of times	18,2±1,4	22.1±1.8	17,5±1,3	22.8±1.7

The results of a comparative analysis of the development of speed-strength qualities in young

boxers aged 12-13 showed the following:

- When testing the control exercise "Tapping Test" in the boxers of the control group, a statistically significant ($p<0.05$) increase in performance was found from 46 times at the beginning of the experiment to 48 times at the end of the experiment with repeated testing, where the results improved. As a result, the average result of athletes improved by 4%.
- When testing the control exercise "Tapping Test" in the boxers of the experimental group, a statistically significant ($p<0.05$) increase in indicators from 45 times at the beginning of the experiment to 50 times at the end of the experiment was found when testing was repeated, where the results improved. As a result, the average result of athletes improved by 10%.
- When testing the control exercise "Throwing a medical ball from behind the head forward 1 kg. m." boxers of the control group showed a statistically significant ($p<0.05$) increase in indicators from 8.05 m. at the beginning of the experiment to 8.8 m. at the end of the experiment during repeated testing, where the results improved. As a result, the average result of athletes improved by 8.5%.
- When testing the control exercise "Throwing a medical ball from behind the head forward 1 kg. m." boxers of the experimental group showed a statistically significant ($p<0.05$) increase in indicators from 8.25 m. at the beginning of the experiment to 9.01 m. at the end of the experiment during repeated testing, where the results improved. As a result, the average result of athletes improved by 8.4%.
- When testing the control exercise "Power Endurance" in the boxers of the control group, a statistically significant ($p<0.05$) increase in indicators was found from 18.2 times at the beginning of the experiment to 22.1 times at the end of the experiment with repeated testing, where the results improved. As a result, the average result of athletes improved by 17.7%.
- When testing the control exercise "Power Endurance" in the boxers of the experimental group, a statistically significant ($p<0.05$) increase in indicators was found from 17.5 times at the beginning of the experiment to 22.8 times at the end of the experiment with repeated testing, where the results improved. As a result, the average result of athletes improved by 23.3%.

Comparing the obtained data of the control and experimental groups, we observe that in two tests, namely in the "Tapping Test" and "Power Endurance", the results in the experimental group are much better than in the control group. But the results in the test "Throwing a medicine ball from behind the head" results are almost the same with a slight advantage in the control group. Fig 1

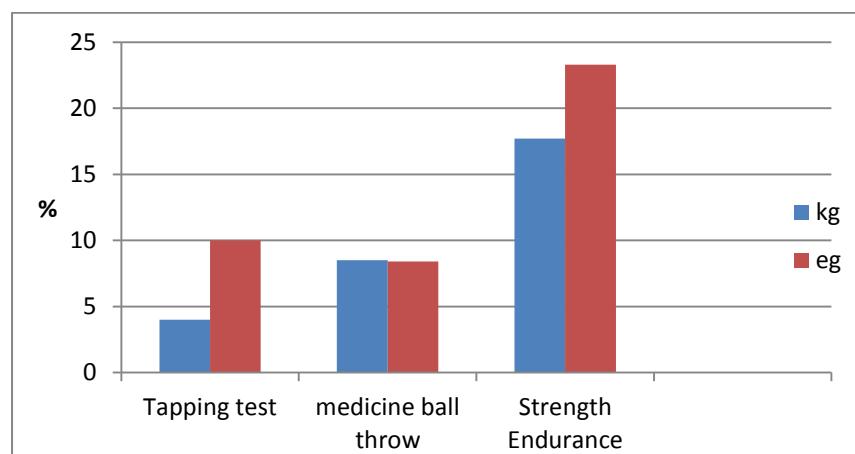


Fig 1.

Conclusion: Based on the results of our research, it is possible to establish the effectiveness of the complex developed by us, which is characterized by a positive effect on the speed-strength

fitness of young boxers aged 12-13. In the course of the pedagogical experiment, it was also established that the ability for speed-strength manifestations is an independent quality that requires adequate means of the training process, corresponding to the main sports movement in terms of temporal and dynamic characteristics.

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